

10 WHAT IS CLAIMED IS:

ADDED 117

1 ~~1. A device for use in entering or exiting confined spaces, the device comprising:~~

2 multiple elongated members removably secured to corresponding joint  
3 sections, the joint sections including an elbow having two legs extending  
4 outwardly at an angle from a central axis, the elongated members including a  
5 post and an extension arm; the post having opposite ends; the arm having a  
6 proximal end and a free end;

7 wherein one leg of the elbow is removably secured to one of the ends  
8 of the post and the other leg of the elbow is removably secured to the proximal  
9 end of the extension arm, the free end of the extension arm being spaced a  
10 lateral distance from the post to define an offset;

11 the device further comprising means for hoisting loads into and out of  
12 the confined space, the hoisting means including a line operatively extending  
13 from the extension arm. 2. The device of claim 1, further comprising a nose  
14 assembly removably secured to the free end of the extension arm.

1 3. The device of claim 1, wherein the multiple elongated members further include  
2 additional members which are interchangeable with at least one of the post and the  
3 extension arm, the additional members having lengths differing from the lengths of  
4 the post and the extension arm.

1 4. The device of claim 3, wherein the additional members comprise interchangeable  
2 extension arms having sufficient lengths to vary the offsets between lengths of 18  
3 inches, 24 inches, 36 inches and 48 inches.

1 5. The device of claim 1, wherein the elongated members comprise tubes and the  
2 joint sections comprise cast joints, the tubes and cast joints having corresponding ends  
3 adapted to slidably engage each other.

1 ~~6. The device of claim 5, wherein the tubes are formed of aluminum and the joints are~~  
2 ~~cast aluminum.~~

1 7. The device of claim 5, wherein the tubes are formed of composite material selected  
2 from the group consisting of carbon fiber, KEVLAR fiber, fiberglass and aluminum-  
3 ceramic composites.

1 8. The device of claim 7, wherein the elbow comprises sleeves extending from the  
2 legs of the elbow, the sleeves sized so that they are slideably and removably received  
3 in the ends of the tubes.

1 9. The device of claim 1, wherein the elbow is asymmetric, making one of the legs  
2 into a shorter leg and the other of the legs into a longer leg, each of the legs  
3 terminating in respective leg ends, each of the leg ends being able to removably fit in  
4 either the proximal end of the extension arm or the end of the post, whereby the elbow  
5 is reversible, the free end of the extension arm defining a first offset when the  
6 extension arm is secured to the shorter leg and defining a second offset, longer than  
7 the first offset, when the extension arm is secured to the longer leg.

1 10. The device of claim 1, wherein the joint sections include a base joint and the  
2 multiple elongated members include base legs removably secured to the base joint.

1 11. The device of claim 10, wherein the multiple elongated members and the joint  
2 sections having corresponding ends, the ends of the elongated members being capable  
3 of slidably engaging any of the ends of the joint sections, whereby the device can be  
4 reconfigured by interchanging locations at which selected ones of the elongated  
5 members are secured.

1 12. A davit assembly for a confined space entry device having a base and means for  
2 hoisting loads, the davit assembly comprising:

3 a substantially vertical post member having a first end removably  
4 secured to and slidably engaged in the base and extending outwardly  
5 therefrom and terminating in a second end;

6 an elbow having two legs joined at an angle, the legs terminating in leg  
7 ends;

8 an extension arm having a proximal end removably secured to and  
9 slideably engaged in one of the leg ends of the elbow, the extension arm

10 extending from the elbow and terminating in a free end, the other leg end of  
11 the elbow being removably secured to and slidably engaged in the second end  
12 of the post; and

13 an asymmetric elbow having a longer leg and a shorter leg, each of the  
14 legs adapted to slideably engage and be removably secured to either one of the  
15 posts and the extension arm, the elbow being reversible to locate the free end  
16 of the extension arm in first and second respective offset distances from the  
17 post; and

18 a nose assembly removably secured to and having a portion slidably  
19 engaged in the free end of the extension arm;

20 wherein the post and the extension arm are formed substantially from a  
21 non-metal, fiber polymer matrix composite material.

1 13. The assembly of claim 12, further comprising a set of the extension arms having  
2 different lengths, the distance between the free end and the post defining an offset, the  
3 amount of the offset being adjustable by selectively replacing the extension arm  
4 secured to the elbow with another of the extension arms from the set.

1 14. A davit assembly for a confined space device having a base and means for  
2 hoisting loads, the davit assembly comprising:

3 a substantially vertical post member, having a first end removably  
4 secured to and slidably engaged in the base and extending outwardly  
5 therefrom and terminating in a second end;

6 an asymmetric elbow having a longer leg and a shorter leg;

7 an extension arm having a proximal end removably secured to and  
8 slideably engaged in one of the legs of the elbow; and

9 a nose assembly removably secured to and having a portion slidably  
10 engaged in the free end of the extension arm;

11 wherein each of the legs is adapted to slidably engage and be  
12 removably secured to either one of the post and the extension arm, the elbow  
13 being reversible to locate the free end of the extension arm in first and second  
14 respective offset distances from the post;

15                    wherein the elbow is formed of cast aluminum.

- 1    15.    The assembly of claim 14, further comprising a set of the extension arms  
2    having different lengths, the distance between the free end and the post defining an  
3    offset, the amount of the offset being adjustable by selectively replacing the extension  
4    arm secured to the elbow with another of the extension arms from the set..